

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions, and listings, of claims in the captioned patent application:

1-53. (Cancelled)

54. (Currently Amended) A cochlear implant comprising:

a stimulator unit configured to generate electrical stimulation signals;

an electrode assembly comprising a lead extending from the stimulator unit, and a contiguous elongate member implantable in a recipient's cochlea, the elongate member having its proximal end contiguous with a distal end of the lead;

one or more electrodes disposed on or in the elongate member each configured to deliver the electrical stimulation signals to the cochlea;

an annular collar slidably mounted around the lead such that the lead extends through a lumen in the collar, the collar having a chamber therein configured to receive a bioactive substance and an outlet through which the bioactive substance can pass from the chamber to a target site in the recipient to deliver the bioactive substance to the target site; and

a stop member, disposed on the electrode assembly, configured to prevent the collar from sliding beyond the stop member toward a distal end of the elongate member.

55. (Cancelled)

56. (Previously Presented) The cochlear implant of claim 54, wherein a portion of the lead is configured to be implanted in a middle ear of the recipient, and wherein the collar is dimensioned to slide along a portion of the lead implanted in the middle ear.

57. (Previously Presented) The cochlear implant of claim 54, wherein the collar has a plurality of different diameters along the length of the collar.

58. (Previously Presented) The cochlear implant of claim 54, wherein the chamber is configured to retain the bioactive substance therein for a period of time.

59. (Previously Presented) The cochlear implant of claim 54, further comprising:
a semi-permeable membrane disposed in the outlet and configured to leach the bioactive substance from the chamber to the target site.

60. (Previously Presented) The cochlear implant of claim 54, wherein the chamber is annular and surrounds the lumen of the collar.

61. (Previously Presented) The cochlear implant of claim 60, wherein the outlet is annular.

62. (Previously Presented) The cochlear implant of claim 54, wherein the collar further comprises:
an inlet in fluid communication with the chamber.

63. (Previously Presented) The cochlear implant of claim 62, wherein the inlet is disposed in a proximal end of the collar, and the outlet is disposed in a distal end of the collar.

64. (Previously Presented) The cochlear implant of claim 62, wherein the chamber is configured to pass the bioactive substance from the inlet to the outlet.

65. (Previously Presented) The cochlear implant of claim 64, wherein the chamber is a pipe extending through the collar from the inlet to the outlet.

66. (Withdrawn) The cochlear implant of claim 62, further comprising:
a reservoir in fluid communication with the inlet and configured to retain the bioactive substance.
67. (Withdrawn) The cochlear implant of claim 66, wherein the reservoir is positionable external to the recipient.
68. (Withdrawn) The cochlear implant of claim 66, wherein the reservoir is positionable within the recipient.
69. (Withdrawn) The cochlear implant of claim 66, further comprising:
a catheter extending from the reservoir to the inlet; and
a pump configured to transfer the bioactive substance from the reservoir into the chamber via the catheter.
70. (Previously Presented) An implantable tissue stimulating device comprising:
an electrode assembly comprising a lead and an elongate member having its proximal end contiguous with a distal end of the lead, and having one or more electrodes disposed on or in the elongate member; and
a slider means for delivery of a bioactive substance slidably mounted on the lead such the lead extends through the slider means, the slider means configured to receive a bioactive substance and deliver the bioactive substance to a target site in the recipient.

71. (Previously Presented) The device of claim 70, further comprising:

 a stop member, disposed on the electrode assembly, configured to prevent the slider means from sliding beyond the stop member toward a distal end of the elongate member.

72. (Previously Presented) The device of claim 70, wherein a portion of the lead is configured to be implanted in a middle ear of the recipient, and wherein the slider means is dimensioned to slide along a portion of the lead implanted in the middle ear.

73. (Previously Presented) The device of claim 70, wherein the slider means has a plurality of different diameters along the length of the slider means.

74. (Previously Presented) The cochlear implant of claim 70, wherein the slider means includes a chamber configured to receive a bioactive substance and configured to retain the bioactive substance therein for a period of time.

75. (Previously Presented) The cochlear implant of claim 74, wherein the chamber is annular and surrounds a lumen of the slider means through which the electrical lead passes.

76. (Cancelled)

77. (Previously Presented) The device of claim 74, wherein the slider means further comprises:

 an outlet in fluid communication with the chamber; and

 a semi-permeable membrane disposed in the outlet and configured to leach the bioactive substance from the chamber to the target site.

78. (Previously Presented) The device of claim 74, wherein the slider means further comprises:

an inlet in fluid communication with the chamber.

79. (Previously Presented) The cochlear implant of claim 78, wherein the slider means further comprises:

an outlet in fluid communication with the chamber,

wherein the chamber is configured to pass the bioactive substance from the inlet to the outlet.

80. (Previously Presented) The cochlear implant of claim 78, wherein the inlet is disposed in a proximal end of the slider means, and the outlet is disposed in a distal end of the slider means.

81. (Previously Presented) The cochlear implant of claim 80, wherein the chamber is a pipe extending through the slider means from the inlet to the outlet.

82. (Cancelled)

83. (Previously Presented) The device of claim 70, wherein:
the device is a cochlear implant.

84. (Previously Presented) A cochlear implant comprising:

a stimulator unit configured to generate electrical stimulation signals;
an electrode assembly comprising a lead extending from the stimulator unit, and a contiguous elongate member implantable in a recipient's cochlea;

one or more electrodes disposed on or in the elongate member each configured to deliver the electrical stimulation signals to the cochlea; and

an annular collar slidably mounted around the lead such that the lead extends through a lumen in the collar, the collar having a non-porous cavity therein configured to receive a bioactive substance and an outlet located on an exterior face of the collar through which the bioactive substance can pass from the cavity to a target site in the recipient,

wherein the outlet faces the electrode assembly and forms a boundary of the cavity.

85. (Previously Presented) The cochlear implant of claim 84, wherein the outlet comprises a valve configured to allow the bioactive substance contained in the cavity to exit the cavity and at least substantially prevent fluid flow from external the cavity into the cavity.